

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (original) A method of driving the coil of an electrohydraulic valve with a ~~PWM~~-pulse width modulator drive, comprising:  
transmitting a feedback signal to a digitizing device that is a finite impulse response filter that is electrically connected to the electrohydraulic valve;  
sampling the feedback signal within the digitizing device to create a plurality of signal samples within a pulse width modulator cycle;  
transmitting the plurality of samples to an accumulator;  
averaging the plurality of samples within the accumulator to create an average value; and  
transmitting the average value to a closed loop control algorithm that generates a pulse width signal to drive the coil of the electrohydraulic valve.
2. (original) The method of claim 1 wherein the digitizing device is an AtoD converter.
3. (original) The method of claim 1 wherein the digitizing device is a DSP.
4. (original) The method of claim 1 wherein the digitizing device is a micro controller.
5. (original) The method of claim 1 wherein the algorithm is a PI algorithm.

6. (original) The method of claim 1 wherein the algorithm is a PID algorithm.

7. (original) The method of claim 1 wherein the accumulator resets when the algorithm sends the pulse width signal to the coil of the electrohydraulic valve.

8. (original) A method of driving a pulse width modulator comprising:

transmitting a feedback signal from the pulse width modulator to a finite impulse response filter;

calculating an average current in the signal within a pulse width modulator cycle with the finite impulse response filter; and

generating a pulse width signal in response to the average current in the signal via an algorithm.

9. (original) A method of driving the electric coil of a machine with a pulse width modulator comprising:

transmitting a feedback signal to a digitizing device that is a finite impulse response filter that is electrically connected to the electric coil of the machine;

calculating the amount of average current in the coil within a pulse width modulator cycle with the digitizing device;

transmitting the average current amount to an algorithm;

generating a pulse width signal in response to the average current in the coil with the algorithm.